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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/646,233
Filing Date: August 22, 2003
Appellant(s): PATERSON ET AL.

Gregg Jansen
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 07 December 2007 appealing from the Office
action mailed 18 October 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 2,459,007	TAYLOR	01-1949
US 3,188,673	NEWMAN	06-1965
US 4,912,805	KRASZNAI ET AL	04-1990
GB 2,041,741	STUBBS	09-1980

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Appellant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 6, 15-17 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Krasznai et al (US patent 4,912,805) in view of Stubbs (GB patent 2,041,741).

The patent to Krasznai discloses the invention, a vacuum cleaner brushroll, substantially as is claimed. Krasznai discloses (see figs. 3,4) a brushroll body (65) with at least one row (76) of bristle tufts. The row of tufts is comprised of both short, stiff bristle tufts (70b) and long, flexible bristle tufts (70a). The short tufts have fewer bristles than the long tufts (col.2, lines 1+). The tufts have different diameters (col. 5, lines 40+).

The patent to Krasznai discloses all of the above recited subject matter with the exception of the different length tufts (short, long) being at first and second angles with respect to a radius direction of the brushroll body.

The patent to Stubbs discloses angling of bristle tufts (2, figs.3,4a) with respect to a radius direction of the brushroll body (3). Such angling is to increase the dust collecting property of the brush by causing a flick action of the tufts. Stubbs sets forth that the angle chosen is in the range of 1-6 degrees and is determined by bristle material and tuft length. Thus Stubbs suggests tufts of different lengths will have different particular angles to achieve proper flick action.

It would have been obvious to one of skill in the art to angle the tufts of Krasznai, as clearly suggested by Stubbs, to increase the dust collecting property of the brush by causing a flick action of the tufts after surface contact. Angling of the tufts of Krasznai will result in all the tufts being angled with respect to the brushroll body. **Further**, as Krasznai discloses tufts of differing lengths, such will have differing angles, as suggested by Stubbs, such that they individually achieve the proper flick action.

Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krasznai et al (US patent 4,912,805) in view of Stubbs (GB patent 2,041,741), as applied to claims 1 and 15 above, and further in view of Taylor (US patent 2,459,007).

The patents to Krasznai and Stubbs disclose all of the above recited subject matter with the exception of the different length tufts being made of different material.

The patent to Taylor discloses a vacuum brush roll (fig.2) with both long, flexible tufts (19) and short, stiff tufts (18). Taylor discloses that differences in tuft flexibility can be achieved with different diameter bristles and/or different materials (see col. 2, lines 53+).

It would have been obvious to one of skill in the art to use different material to achieve the differences in flexibility for the bristles of Krasznai instead of or in addition to the different diameter bristles, as clearly suggested by Taylor, to enable increased control of the flexibility of the bristles. Such would also enable same size tufts to be used for both tufts thus providing a uniform row of tufts.

Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krasznai et al (US patent 4,912,805) in view of Stubbs (GB patent 2,041,741), as applied to claims 1 and 15 and further in view of Newman (US patent 3,188,673).

The patents to Krasznai and Stubbs disclose all of the above recited subject matter with the exception of different length tufts being of different colors.

The patent to Newman discloses a brush wherein different length tufts are of different colors.

It would have been obvious to one of skill in the art to make the different length tufts of different colors, as clearly suggested by Newman, to enable increased awareness of the different length tufts. Further, merely coloring different components of a structure different colors appears entirely obvious as a purely ascetic change.

(10) Response to Argument

Appellant argues the rejection of claims 1-3, 6, 15-17 and 20 collectively as a group. Therefore, these claims stand or fall together. Appellant argues that Krasznai does not teach a first bristle tuft at a first angle from a radius direction and a second bristle tuft at a second angle that is different from the first angle. Appellant sets forth that “Krasznai does not disclosed even a single angled bristle tuft”. While such is true, Krasznai is not relied upon to show such. Krasznai is not relied upon by itself, but in combination with Stubbs, which does teach angling of brushroll tufts. Applicant's arguments against the reference individually are not persuasive as one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Thus, whether or not Krasznai discloses angling of the tufts does not appear of particular relevance to the combination rejection set forth.

Appellant argues that Stubbs does not teach a row of bristle tufts including first tufts and second tufts, with a first tuft being oriented at a first angle and a second tuft being oriented at a second angle that is different from the first angle. Such is not persuasive. Stubbs is not relied upon by itself, but in combination with Krasznai. As set forth above in the rejection, Stubbs suggests that tufts of differing lengths will have differing angles to achieve the proper flick action. One of skill in the art reading Stubbs understands that different length tufts employ different angles to achieve optimal flick action. Employing such teaching in the brushroll of Krasznai, **which has different height tufts within each row**, would result in the different height tufts having different angles as claimed. As Appellant points out, Stubbs does shows each of his rows with all tufts having a common angle, **however**, the height of the tufts in each row is the same. Thus, obviously, they

would have the same angle to optimize flick action. Such is not the case in Krasznai where the height of the different tufts within each row does vary between short tufts (70b) and long tufts (70a). If the angle of the different height tufts were the same for Krasznai, when modified as suggested by Stubbs, how would proper or optimal flick action be achieved? To provide the different height tufts of Krasznai with exactly the same angle would appear to go against what is suggested by Stubbs to achieve proper flick angle.

Appellant argues that the combination is improper, apparently because the motivation is improper. However, it is unclear exactly why Appellant feels the motivation, to increase dust collection by introducing flick action, is improper. Appellant goes on to discuss that the ends of the tufts of Stubbs are tangentially trimmed while his are substantially flat and perpendicular to the tuft's length. However, such limitations do not appear to be claimed, and therefore such does not appear of particular relevance. Appellant also argues that angling the tufts of the present invention (Appellant's invention) would create a different floor contacting configuration and would not generate a flick action. Such is not clearly understood as the Examiner is not suggesting modifying Appellant's invention by tangential trimming. Whether or not Appellant would or could tangentially trim his tuft ends or not does not appear at issue.

Appellant argues that modifying Krasznai by Stubbs would change the principle of operation of Krasznai. Such is not persuasive. It does not appear that adding a flick action to the tufts of Krasznai by angling them changes the principle of operation or the Krasznai brushroll. Such will still act to perform sweeping by rotation and floor contact. Appellant has not specifically set forth how the principle of operation is changed.

Art Unit: 3700

Appellants arguments with respect to claims 4 and 18 are noted. Appellant sets for that claims 4 and 18 depend from independent claims 1 and 15 and are patentable for the same reasons. Therefore, claims 4 and 18 stand or fall with the rejection of claims 1 and 15 as the argument is the same.

Appellants arguments with respect to claims 5 and 19 are noted. Appellant sets for that claims 5 and 19 depend from independent claims 1 and 15 and are patentable for the same reasons. Therefore, claims 4 and 18 stand or fall with the rejection of claims 1 and 15 as the argument is the same.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Gary K Graham/
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